

A DESCRIPTION OF *MACROPUS ISABELLINUS*,
GOULD.¹

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(Plates xviii.—xix.)

THE subject of the following description was obtained by Mr. J. T. Tunney at Barrow Island, North-western Australia, on the 16th November, 1900. The prepared skin, together with the skull and leg bones, was forwarded to the Trustees by Mr. B. H. Woodward, Curator of the Western Australian Museum. It represents an adult male, and, as ascertained by an examination of the skull, the animal was what Mr. Thomas² calls "aged," the fourth molar tooth being in place.

DESCRIPTION.

Size medium, form stout and heavy. Fur of moderate length, very soft, fine, and nearly straight, coarser on the head and neck; muzzle with a large naked rhinarium, the hair encroaching on its hinder border, much as in *M. robustus*. General colour buffish-red, paler on the flanks, where it merges into the white of the belly; browner on the head. Ears, brown without, darker towards the tips, and white within. Snout, grey above, margin of upper lip white; throat white; a large oval dark-grey patch on the chin. Upper arm and chest white, belly tinged with yellow, top of hip and middle of leg grey. Lower forearm brown above, becoming darker towards the fingers, on which the hair is dark brown. Feet similarly coloured, the hair on the middle toes black with brown tips; that of the other toes golden-brown. Central hind claws short, with a groove along each side; the hair projects far beyond all the claws. Tail uniformly yellowish-buff above and below, with the exception of its basal portion, the upper part being coloured like the body, and the lower part white.

The hair of the face and head is inclined in opposite directions, meeting behind the eyes, where a transverse crest is formed; a central ridge passes thence between the ears and some way down

¹ Gould—Proc. Zool. Soc., ix., 1841, p. 81.

² Thomas—Brit. Mus. Cat., Marsupialia, 1888, p. 7.

the nape, on which the hair has a downward direction. On the chest the hair passes upwards and outwards, and forms a ridge where it meets the hair from the nape; this ridge thus forms the dividing line between the red and white fur, the two colours being sharply defined. A similar but larger ridge is formed between the hind limb and butt of the tail; this does not, however, separate the colours.

	<i>Dimensions.</i>					mm.
Head and body	1020
Tail	815
Hind foot	235
Ear	75
<i>Limb bones—</i>						
Humerus	112
Radius	135
Ulna	168
Femur	200
Tibia	300
Metatarsus	165

Skull.—Massive, with a short facial portion; muzzle broad and inflated, the nasal chamber wider than deep; nasals moderate, their greatest combined width 2.5 and their central width 3.1 times in their length. Ascending process of premaxilla greatly expanded above, the naso-premaxillary suture one-half longer than the naso-maxillary. Interorbital region not inflated, the supra-orbital edges very pronounced, with a well marked concavity between them. Inter-temporal constriction great, the least transverse breadth equal to the posterior breadth of one of the nasals. Opening of lacrymal canal bounded in front by the maxillary. Palatal foramina slightly longer than M^1 , they extend backwards to the maxillo-premaxillary suture, the maxillary forming their posterior border. Anterior palate not very broad, its least width 2.5 in the diastema, its edges marked but not acute. Palate very complete, the invariable foramina on the palato-maxillary suture and two or three small holes in the palatine excepted. Rami of mandible short, deep, and thick; the horizontal and ascending portions of each form almost a right-angle.

Teeth.—The incisor series are relatively shorter than in *M. giganteus*. There is an external notch in I^3 , and faint trace of one anterior to it. This tooth is almost as long as I^1 and I^2 combined. The molar series are markedly bent inwards anteriorly; each tooth has a small anterior ledge, in the fourth molar it is connected with the first main ledge by a short bridge; this bridge is scarcely traceable in the other teeth; the usual transverse ledges are well developed, as are also the connecting ridges. Anterior cheek teeth deciduous. The lower incisors are below

the average length; the molar series are parallel; the anterior pair have passed out of action, are deflected downwards, much produced forwards, and blackened by disuse.

<i>Dimensions of Skull.</i>				mm.
Basal length	...	...	...	144·0
Greatest breadth	...	...	...	90·0
Nasals, length	...	...	...	59·0
„ breadth	...	...	...	23·3
„ central breadth	...	...	...	19·2
Constriction	...	...	...	14·3
Palate, length	..	...	...	93·0
„ outside M^2...	...	...	...	46·5
„ inside M^2...	...	...	...	28·3
Palatal foramina	...	...	...	10·5
Diastema	...	...	...	38·3
Basi-cranial axis	...	...	...	42·5
Basi-facial axis	...	...	...	105·0
Facial Index	...	...	...	247
Teeth, ³ length of I^3	...	...	...	8·4
Teeth, length of M_s^{1-3}	...	...	...	26·5

The aggregate characters of this animal indicate what may be its habit in life. A stunted kangaroo, inhabiting a bleak island, it is of stout and heavy build, ill adapted to life on the plains, but well fitted for rough country: this may be adduced from its stout short limbs, the hind ones especially, and the thick, long hair of the feet entirely concealing the claws, as in the typical rock wallabies (*Petrogale*) and, in a lesser degree, the wallaroo (*M. robustus*) of the mountains. Its characters are so marked that it fails to satisfy the conditions of Mr. Thomas' synopsis,⁴ for, while the size of its skull well admits it as a kangaroo, the shortness of its hind feet classes it as a wallaby. The skull also is peculiar, and exhibits a higher cranial index than any other kangaroo. In some of the wallabies, however, the cranial index is much higher than in *M. isabellinus*.

All the previously published descriptions of this species are based upon the type specimen in the British Museum; this "consists merely of a flat skin, without head, arms below elbows, legs, or tip of tail."

From such imperfect material Thomas ventured the opinion that it is most nearly allied to *M. rufus*. In colour and the general appearance of the fur this is so, but when taken in its entirety it is more akin to *M. robustus*. Judging from our single

³ In the British Museum Catalogue, *loc. cit.*, p. 29, I^3 is misprinted I^1 , and apparently also on p. 13 in connection with *M. magnus*.

⁴ Thomas—*Loc. cit.*, pp. 11, *et. seq.*

specimen it is inferior in size to either of these species. Thomas concluded its dimensions were about the same as those of *M. rufus*. Gould considered it as about equal to *M. bennettii*.

The skull differs widely from that of *M. rufus*; in this species the facial region is proportionately greater than in any other kangaroo, and the nasals are correspondingly long and narrow. In *M. isabellinus*, as already mentioned, the facial region is the shortest of all the kangaroos, and is, in this respect, nearest allied to *M. robustus*, in which also the nasals are short and broad.

As *M. isabellinus* was known only from a skin, and *M. magnus*, Owen, from a skull, there was, as suggested by Thomas, a possibility that the two were identical. The study of a skull of the former shows that the species are quite distinct. In *M. magnus* the opening of the lacrymal canal is entirely in the lacrymal bone, the palatal foramina are very long, extending some way into the maxilla, and the posterior palate is very incomplete.